the vehicle (such as shown in FIG. **14**A) is prepared for the tactile device (in-wheel tactile device) **42** assembled in the steering wheel **31**. In the determination performed in step ST**208**, a threshold value representing a vehicle speed 0 Km/h is used. If the determination shows the vehicle being in the parked state, the adjustment dial **307** of the adjustment permission switch **302** is turned to a desired position (STEERING WHEEL, PEDAL or SEAT), during which time the switch **302** is automatically turned on.

[0195] Then, the adjustment amount input means **303** is operated. By depressing the plus-side input section **312**, for example, the frequency of the tactile pattern (wave motion) is increased. This means that the gradient of the frequency/lateral acceleration table map increase with the amount of actuation by the plus-side input section **312** of the adjustment amount input section **303**.

[0196] With respect to the respective lateral acceleration values between a minimum and a maximum set in advance in the adjusted table map and the simulation means **304**, information about the frequency of the tactile pattern is outputted in sequence. On the basis of the information thus outputted from the simulation means **304**, the drive circuit or driver **45** drives the in-wheel tactile device **42** to operate, so that the driver is able to adjust the nature of a tactile sensation through an adjustment of the frequency of the tactile pattern (wave motion) from a minimum to a maximum in accordance with its own comfort.

[0197] The tactile pattern produced by the in-wheel tactile device **42** can be changed by operating the tactile pattern input section **45** in the same manner as done in step ST**206**. The FREQUENCY/LATERAL ACCELERATION table map may be replaced by the FREQUENCY/VEHICLE SPEED table map (such as shown in FIG. **14**B).

[0198] After the adjustment by the driver is completed, the adjustment dial **307** of the adjustment permission switch **302** is turned to the OFF position whereupon a decision is inputted and, based on the decision information, the table map is renewed or updated. The adjustment operation is thus completed.

[0199] The adjustment described above is addressed to an adjustment operation performed to increase the frequency of the in-wheel tactile device **42** incorporated in the steering wheel **31**. It is to be noted that other adjustment operations, which may be due, for example, for decreasing the frequency of the in-wheel tactile device **42** or for another tactile device such as the pedal tactile device **201**, can be also performed in the same manner as described above. The adjustment permission switch **302** and the adjustment amount input means **303** provided on the center console **308** for the adjustment described above may be replaced by corresponding functions of the navigation device **26**.

[0200] FIGS. **29**A and **29**B show a modified form of the pedal tactile device according to the present invention. The modified pedal tactile device **321** comprises a vibration generating mechanism **324** associated with an accelerator pedal **322**. The accelerated pedal **322** is an existing accelerator pedal initially provided in the vehicle and includes a foot plate **325** attached to the free end of an arm **205**. The vibration generating mechanism **324** is mounted on a backside of the foot plate **325**. The vibration generating mechanism **324** may use any type of vibration source. In the illustrated embodiment, an electric motor **331** (FIG. **29**B) equipped with an eccentric weight **332** (FIG. **29**B) on its output shaft (not designated) is employed as a vibration source. The electric or motor-driven vibration generating mechanism **324** is mounted to the backside of the foot plate **325** and covered with a cover **333**.

[0201] The pedal tactile device **321** comprised of the motor-driven vibration generating mechanism **324** operates such that when the driver depresses the foot-plate **325** of the accelerator pedal **322** to speed up the vehicle, the electric motor **331** is energized to rotate the eccentric weigh in unison with the output shaft. In this instance, due to the eccentricity of the eccentric weight **332** relative to the output shaft of the motor **331**, the vibration generating mechanism **324** (forming the pedal tactile device **321**) starts vibrating. The thus produced vibration is directly transmitted to the foot plate **325** and thence to the bottom of the driver's foot F.

[0202] The vibratory motion thus transmitted to the driver's foot F can be well perceived by the driver as a kind of tactile information indicative of an accelerated condition of the vehicle. It is preferable that the vibratory motion generated by the vibration generating mechanism **324** has a variable frequency, which varies in direct proportion to the vehicle speed or lateral acceleration. By thus linking the characteristic of the vibratory motion with the vehicle traveling conditions, transmission of tactile information can be performed with high fidelity. Furthermore, since the tactile device **321** vibrates the foot plate **325** itself, the driver is freed from an obligation to continuously depress the foot plate **325**, which is due for the embodiment shown in FIGS. **18**A and **18**B where a wave motion (vibratory motion) occurs only at the skin layer **216** of the accelerator pedal **22** and not at the foot plate **215** on which the skin layer **216** is provided. This will lessen the labor of the driver. Additionally, mounting of the tactile device **321** to the backside of the foot-plate **325** improves the appearance of the accelerator pedal **322** and the weatherability of the tactile device **321** against rainwater, dust and dirt that may be brought to the foot plate **325** via the driver foot F.

[0203] Obviously, various minor changes and modifications of the present invention are possible in light of the above teaching. It is therefore to be understood that within the scope of the appended claims the invention may be practiced otherwise than as specifically described.

What is claimed is:

1. A vehicle state information transmission apparatus comprising:

operation means actuatable by a driver of a vehicle for operating the vehicle;

a vehicle state detecting device for detecting a state of the vehicle;

warning means for issuing a warning to the driver based on information pertaining to the vehicle state detected by the vehicle state detecting device; and

vehicle state information transmitting means for transmitting the information pertaining to the vehicle state detected by the vehicle state detecting device to the driver,

wherein the vehicle state information transmitting means comprises a tactile device which transmits a change in the vehicle state via the operating means to the driver as tactile information, and the tactile device is operable in conjunction with the warning means.

2. The vehicle state information transmission apparatus of claim **1**, wherein the tactile device is capable of producing a movement of the tactility in different patterns that can be varied based on the information pertaining to the vehicle state detected by the vehicle state detecting device.